The Knowledge Bank at The Ohio State University

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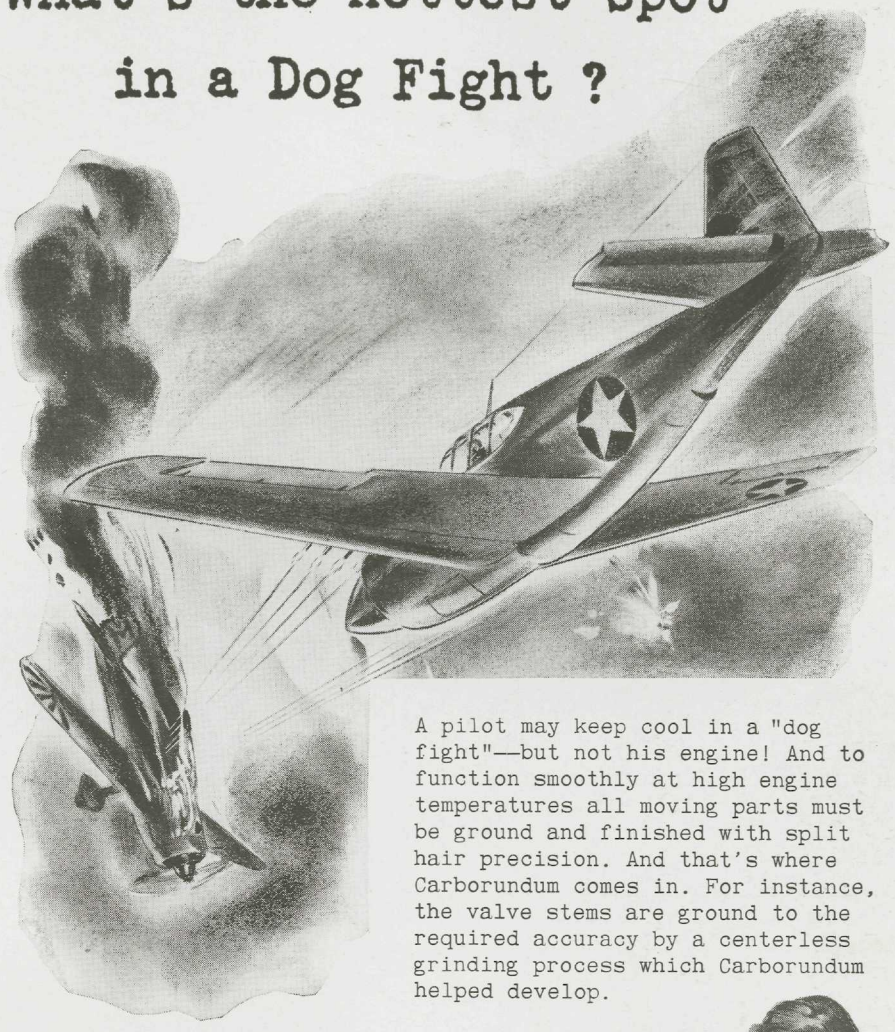
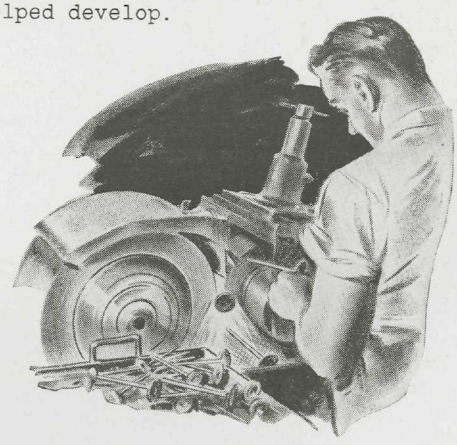
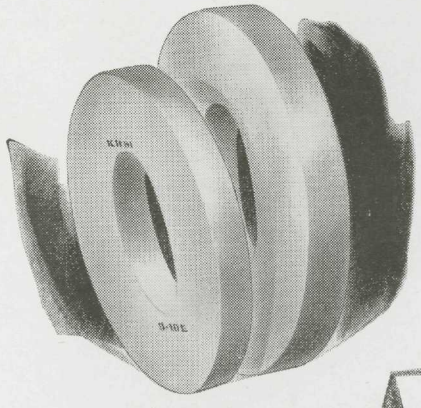
What's the hottest spot in a Dog Fight ?



A pilot may keep cool in a "dog fight"—but not his engine! And to function smoothly at high engine temperatures all moving parts must be ground and finished with split hair precision. And that's where Carborundum comes in. For instance, the valve stems are ground to the required accuracy by a centerless grinding process which Carborundum helped develop.

The centerless grinder grinds the valve stems to an accuracy of five ten-thousandths of an inch. Does it, too, in half the time other finishing methods would require. Carborundum has led in the development of centerless grinding wheels to speed the output of valves, pistons, shafts and other such parts that go into a plane.





Industry at war is finding new uses for grinding wheels and other abrasive products...Weapons for Production...every day. When you get in the field and encounter a production problem which abrasives might solve, write The Carborundum Company, Niagara Falls, N. Y.

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ABRASIVE PRODUCTS

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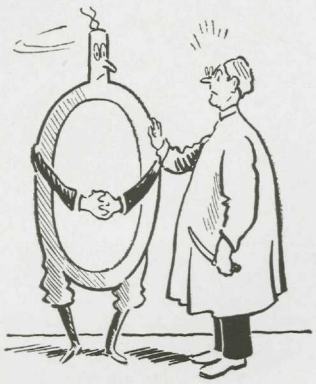
G-E Campus News



PLASTIC SURGERY

MISTER FIVE BY FIVE had nothing on radio antenna enclosures until the "doctors" of the G-E Plastics Laboratory (PhD's, not MD's) went to work on the problem of streamlining. The result was a plastic housing that a plane hardly knows it's carrying.

That's just one wartime activity of the Laboratory chemists. They're also concocting plastics for fuse caps on mortar shells and for a vast variety of parts for battleships, tanks, and what-have-you's.

The name "plastics" covers a lot of different materials. These G-E chemists are applying the most precise and ingenious chemical techniques to increase that variety. So, if a special job requires a material with combined properties that no existing material has, they go to work to cook up an entirely new plastic to fill the bill.

The whole story can't begin to be told yet. But when it can, you'll be amazed at how far plastics have gone in wartime, and how many new peacetime jobs they'll be ready to tackle afterward.

PUT A NICKEL IN IT

NICKEL'S gone to war. But that doesn't mean that the juke box and pay telephone will soon be operating on a diet of "wooden nickels" and slugs. For every self-respecting coin-operated machine has a magnet attachment that refuses to accept all coins that do not have the magnetic properties of genuine ones.

So, when a new formula for the five-cent piece was needed in order to save nickel and copper for war service, it had to have magnetic properties close to those of the old-fashioned nickel. A number of metallurgical experts were asked for their advice.

Your guess is as good as the next as to whose advice was finally followed, but the formula submitted by the metallurgical section of the G-E Research Laboratory was pretty close to the one picked. The new "nickel" doesn't *have* any nickel in it, and has lost 19 per cent of its copper—and the metals saved are on their way to hit the Jap-pot.

JAP NAP

ONE night Hirohito had a nightmare. He dreamt that Shangri Las were springing up all over and planes were swarming over him like flies.

Perhaps that nightmare is nearer reality than his Imperial Nibs knows. For now, in practically no time at all, any open field, even though the ground is soft, can be transformed into a hard runway for American bombers starting off to make hay of enemy objectives.

To turn the trick, flexible steel mats are laid along the field. By means of resistance-welding machines guided by G-E electronic tubes, steel bars are automatically joined together to form these mats. The speed far exceeds that of a crew of hand welders.

On some dark night, in some deserted spot, our army engineers will swiftly unload these steel mats, joining them into a smooth, solid runway. And presto! Hirohito's nightmare will become a grim reality. General Electric Co., Schenectady, N. Y.

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